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cult, if not impossible, to say what should be called *Chrysodina* and what *Nodonota*. As far as our species are concerned, those of the latter genus have a distinct basal marginal line to the thorax which is not seen in *Chrysodina*, and the third joint of the antennæ obviously longer than the second.

Occurs from the Middle States to Colorado and Arizona.

MONOGRAPH OF THE NORTH AMERICAN SPECIES OF TACHYTES.

BY WILLIAM J. FOX.

The North American species of this genus have never been monographed. The only important paper published relating to our species is by William H. Patton,* in which that author gives a history of the genus and a catalogue of the American species. I have been aided greatly in my work by having before me the types of Cresson and Patton, these authors having described two-thirds of the heretofore known species. To Mr. E. T. Cresson I am indebted for the use of the material belonging to the American Entomological Society (the collection of that society lacks but one species to be completed) and to Prof. C. V. Riley for the loan of the United States National Museum's collection, which is also very complete. The types of all the new species are in the former collection, with exception of *T. calcaratus*, which is in the National Museum. I am also indebted to Mr. William H. Ashmead, for favors received. In distinguishing the species it will be found necessary to open the mandibles, and in some cases to remove some of the hair on the clypeus, so that the clypeal teeth may be distinguished.

TACHYTES Panzer.

Tachytes Panz., Krit. Rev. ii, p. 129, 1806.

Lyrops Illig. Ross., Faun. Etrusc. ed. 2, ii, p. 161, 1807.

Tachyptera Dahlb., Hym. Eur. i, p. 133, 1845.

Tachytes Kohl., Verh. Zool.-Bot. Gesell. Wien, xxxiv, p. 327, 1884.

Body generally stout. Anterior femora of male without or with an emargination or excavation near the base on underside.† Spines on the first joint of fore tarsi short, stout, not flexible. Pygidial

* Proc. Bost. Soc. Nat. Hist. vol. xx, p. 391, 1880.

† According to Kohl (Verh. Zool.-Bot. Gesell. Wien, xxxiv, p. 328) *T. aurentus* was the only species of *Tachytes* having the fore femora emarginate near the base. About one-half our species possess this character.

area large, broad, always more or less pubescent. Mandibles notched outwardly, the notch generally broad (in *T. obscurus* and in the West Indian *T. insularis*) it is very narrow and situated about the middle, their inner margin generally bidentate.* Anterior ocelli round and distinct, the posterior pair flat, narrow and elongate, placed obliquely. Marginal cell elongate, generally lanceolate or rounded at tip, the appendiculation small and sometimes indistinct. Size variable.

The genus may be divided into two sections as follows :

Fore coxæ of male simple; fore femora of male beneath, near the base, entire females with the thorax generally densely pubescent.....SECTION I
Fore coxæ of males with an elongated process; fore femora of male beneath, near the base, emarginate; thorax of females not densely pubescent.

SECTION II.

The females of the first section are generally short, robust insects, while those of the other section are rather long and narrow, and never have the clypeus produced medially as the majority of those of the first section do. In some respects the Section II agrees with *Tachysphex*, but the spines on fore tarsi of female are not long and flexible, and the pygidium is hairy.

SECTION I.

FEMALES.

- 1.—Clypeus with the anterior margin, in the middle, produced into a large quadrate tooth or lobe, and with several smaller teeth laterally.....2.
Clypeus with the anterior margin not or scarcely produced into a lobe, at the most thickened in the middle..... 7.
- 2.—Metanotum strongly sulcate medially..... 6.
Metanotum not strongly sulcate medially.....3.
- 3.—Third joint of antennæ about one-quarter longer than the fourth.....4.
Third joint of antennæ equal to, or but little longer than the fourth.....5.
- 4.—Thorax densely clothed with golden-yellow pubescence, so that the sculpture of the metanotum is hidden. Length 18—22 mm.....**validus**.
Thorax sparsely clothed with grayish pubescence; metanotum finely granulated (four hind tibiæ within with a dark stripe). Length 12—14 mm.
harpax.
- 5.—Median process of clypeus divided into two distinct lobes; space between the eyes at top equal to the length of joints two and three of antennæ, the latter joint, in length, about equal to the fourth; front and thorax with golden pubescence..... **prædator**.
Median process of clypeus not bilobed, its apex simply incurved; third antennal joint slightly longer than the fourth; front and thorax clothed with silvery-gray pubescence..... **calcaratus**.

* In some species of Section II the mandibles have but one tooth within.

- 6.—The sulcus on metanotum very wide; scutellum scarcely impressed; pygidium with a coppery lustre.....**mandibularis**.
 The sulcus on metanotum not wide; scutellum distinctly impressed; pygidium silvery.....**breviventris**.
- 7.—Abdomen black8.
 Abdomen in part red; head and thorax clothed with dense silvery pubescence.....**fulviventris**.
- 8.—Abdomen dorsally with four silvery bands; front silvery.....9.
 Abdomen dorsally with but three silvery bands; longer spur of hind tibiæ in length about equal to the first joint of the hind tarsi; front golden.
crassus.
- 9.—Longer spur of hind tibiæ longer than the first joint of the hind tarsi; apex of femora, tibiæ and tarsi, yellowish ferruginous.....**columbiæ**.
 Longer spur of hind tibiæ, in length, about equal to the first joint of hind tarsi; legs black, tibiæ and tarsi with silvery pile, the apical portion of the tarsi ferruginous.....**pepticus**.

MALES.

- 1.—Flagellum with the basal joints not or scarcely rounded out beneath, the apical joints, except in *crassus* and *pepticus*, abnormal.....8.
 Flagellum with the basal joints strongly rounded out beneath, the apical joints normal.....2.
- 2.—Anterior margin of clypeus, in the middle, not produced into a tooth or lobe, at the most simply thickened4.
 Anterior margin of clypeus in the middle produced into a tooth or lobe...3.
- 3.—Metanotum slightly sulcate; thorax densely pubescent; median process of clypeus not prominent, strongly impressed, having the appearance of being bituberculate.....**validus**.
 Metanotum distinctly and rather strongly sulcate; thorax sparsely pubescent; median process of clypeus strong, not bituberculate.
breviventris.
- 4.—Last dorsal abdominal segment tufted laterally with dark hair.....7.
 Last dorsal abdominal segment not tufted with dark hair.....5.
- 5.—Hind tarsi not at all spinose; lateral teeth of clypeus large and distinct.
mandibularis.
 Hind tarsi distinctly spinose.....6.
- 6.—First joint of the flagellum shorter than the second; head and thorax densely clothed with golden pubescence; space between the eyes at top narrower than usual.....**prædator**.
 First joint of the flagellum longer than the second; front and clypeus silvery; thorax sparsely clothed with grayish pubescence....**calcaratus**.
- 7.—Emargination of last ventral plate very narrow; first joint of flagellum in length about equal to the second; head and thorax with golden pubescence.....**harpax**.
 Emargination of last ventral plate broad and round; first joint of flagellum shorter than the second; head and thorax with silvery pubescence.
columbiæ.
- 8.—Apical joints of the antennæ normal.....9.
 Apical joints of the antennæ abnormal..... 10.

9.—Apex of femora, tibiæ and tarsi, yellow-ferruginous; hind tarsi very feebly spinose **crassus.**

Legs, except apex of tarsi, black; hind tarsi rather strongly spinose.

pepticus.

10.—Abdomen in part red 11.

Abdomen entirely black **fulviventris** var.

11.—Two apical joints of the antennæ narrow and elongate, much narrower than joints 9—11, which are visibly broadened **fulviventris.**

Two apical joints of the antennæ somewhat spatulate, broader than the two preceding joints **spatulatus.**

1. **Tachytes validus** Cress. Pl. XI, figs. 1 and 2.

♀.—Anterior margin of the clypeus with a broad, quadrate production medially and armed with three small teeth on each side, the two outer being most distinct, the production with an impression, which gives it the appearance of being bituberculate; space between the eyes at top about equal to the length of the second and third joints of the antennæ united; first joint of the flagellum about one-quarter longer than the second; vertex with rather strong, separated punctures, parted by a distinct sulcus, which originates from a strong depression just behind the ocelli: dorsulum very finely punctured; scutellum punctured like the dorsulum, strongly convex, scarcely impressed in the middle; metanotum with an exceedingly slight, impressed line down the middle, which is broadened into a dimple-like fovea at apex, being again narrowed into a deep sulcus on the posterior face; tibiæ armed with short, strong spines, which are shorter than those on fore tarsi; abdomen with exceedingly fine punctures, almost smooth; beneath shining, with large, sparse punctures; pygidium convex, depressed along the sides on the apical portion, black; basal half of mandibles, scape beneath, tegulæ, legs except the coxæ, trochanters and greater part of femora, yellow-ferruginous; face and clypeus densely covered with bright, silvery pile and with long, sparse, golden hairs. Thorax and femora densely clothed with dark golden pubescence, becoming sparse on the pectus. Wings hyaline, the nervures ferruginous, marginal cell hardly extending out as far as the apex of the third submarginal, second submarginal cell broader than the third at the top; dorsal segments 1—4 of the abdomen with a broad, apical, silvery band; first segment above clothed with grayish hairs; ventral segments 2—5 each with a transverse row of stiff hairs before their apex, the fifth dorsal segment with a similar row; pygidium clothed with silvery pile. Length 18—22 mm.

♂.—Differs from the female as follows: anterior margin of clypeus not so strongly produced in the middle, the process more strongly impressed; the sulcus which divides the vertex is shorter; depression behind the ocelli not so strong; joints 1—5 of the flagellum strongly rounded out beneath, especially joints 2—4; scutellum distinctly impressed medially; metathorax furrowed as in the female; the thorax is generally less densely clothed with pubescence; apical margins of ventral abdominal segments testaceous; eighth ventral plate bifurcate; second and third submarginal cells at the top about equal. Length 15—19 mm.

Texas.

2. **Tachytes mandibularis** Patt.

♀.—Clypeus as in *validus*, but the median process is narrower, the outer lateral tooth is distinctly separated from the inner ones, and is more obvious; space

between the eyes at the top is greater than the length of joints 2 and 3 of the antennæ united; region enclosed by the ocelli separated by a very strong furrow; vertex finely and closely punctured; first joint of flagellum scarcely a quarter longer than the second. Thorax very finely and closely punctured; scutellum scarcely impressed; metanotum with a very strong and wide sulcus medially, the furrow very delicately and transversely striated at about the middle and is broadened at the base; the posterior face also strongly furrowed medially; tibiæ armed with long thorns, in length they are about equal, in some cases longer than those on the fore tarsi. Abdomen with exceedingly fine and close punctures above; ventral segments 3—6 shining, with sparse, distinct punctures, those on segment six strongest and more compact; pygidium with coppery pubescence, not depressed along the sides, black; basal half of mandibles, scape, except line above, tegulæ, apex of femora, tibiæ and tarsi ferruginous; marginal cell reaching to the apex of the third submarginal; front, face and clypeus clothed with dense, silvery pubescence and with longer hairs of the same color. Thorax and femora clothed with pale golden hair, most dense on thorax beneath, that on the metathorax palest; dorsal sutures of thorax filled with pubescence similar to that on the face; apical margins of abdominal segments 1—4 silvery. Length 14—16 mm.

♂.—Resembles the female; anterior margin of the clypeus thickened in the middle and armed with a very large tooth on each extreme side; the third antennal joint is much longer than the fourth; joints 3—7 rounded out beneath, especially the fourth and fifth; metanotum with a fovea at base and apex, finely granulated; hind tarsi not at all spinose; longer spur of hind tibiæ shorter than the first joint of the hind tarsi; eighth ventral segment with an even, rounded emargination. Length 12—14 mm.

Occurs from Connecticut to Florida, Montana, Nebraska. Smaller male specimens (which may be, as Mr. Patton has suggested, a seasonal dimorph) have the groove on metanotum distinct and the clypeus is armed with three small teeth laterally.

3. *Tachytes harpax* Patt. Pl. XI, fig. 5.

♀.—Medial production of the clypeus strongly impressed, or bituberculate, the three lateral teeth equally distinct; depression behind ocelli tolerably strong, less so than in *mandibularis*; medial impressed line of the vertex distinct; vertex with strong, sparse punctures; dorsulum with very fine, but distinct punctures, the depression in the middle anteriorly, not strong; scutellum with a slight medial impression; metanotum having the appearance of being very finely granulated, a fovea at base connected with the fovea at apex by a faint impressed line; tibiæ and tarsi strongly spinose; ventral abdominal segments 3—6 with large, sparse punctures, the punctures more abundant than in *mandibularis*; black; mandibles and scape beneath dark rufo-piceous; labrum, tegulæ, neurathion of wings, knees, tibiæ, except a dark stripe beneath and tarsi, yellow-ferruginous. Wings hyaline, apical margins slightly darker. Head, thorax and first segment of the abdomen, clothed with pale fuscous pubescence; front, face, clypeus, cheeks, pleura, femora, collar and apical margins of dorsal segments 1—4 and the pygidial area silvery. Length 12—14 mm.

♂.—Anterior margin of clypeus rounded or forming a slight angle in the middle, with three small teeth laterally; joints 1—3 of the flagellum about equal

in length, joints 1--5 very strongly rounded out beneath; scutellum distinctly impressed medially; metanotum furrowed; eighth ventral plate narrowly incised; seventh dorsal segment and the sixth ventral each with two tufts of dark brownish hair; second submarginal cell much narrower than the third at the top; hind tarsi distinctly spinose. Length 12 mm.

Connecticut, Vermont, New Jersey, S. Dakota (Aldrich).

4. **Tachytes calcaratus** n. sp. Pl. XI, figs. 3 and 7.

♀.—Median process of anterior margin of the clypeus incurved at apex, the extreme lateral teeth not strong; space between the eyes at top equal to, or a little greater than the length of the second and third antennal joints; first joint of the flagellum slightly longer than the second, which is in turn longer than the third joint; dorsulum and scutellum microscopically punctured, the latter strongly impressed medially; metanotum sculptured as in *prædator*, and is also longer, the impressed line not so distinct, the fovea at apex is broader and shallower, and is finely and transversely striated on apical portion; tibiæ and tarsi strongly and copiously armed with strong spines; longer spur of hind tibiæ about one-quarter longer than the first joint of hind tarsi. Abdomen beneath, on segments 3--5, punctured like the second segment, the apical portions, medially, sparsely punctured; third segment on middle basal portion impunctate; pygidium longer, and the apex is narrower than in *mandibularis* and *harpax*; black; basal half of mandibles, scape beneath, tegulæ, except base, the apex of femora, tibiæ and tarsi, yellow-ferruginous; front and clypeus densely, and the thorax with silvery-gray pubescence, and in addition with long gray hairs, which are especially prominent on metathorax and first segment of abdomen; dorsal abdominal segments 1--4 and ventrals 3 and 4 laterally, silvery; pygidium with golden pubescence. Wings subhyaline with a yellowish tinge, nervures darker than the tegulæ; third submarginal cell extending beyond the marginal. Length 17 mm.

♂.—Anterior margin of clypeus in the middle subtruncate and with two extreme lateral teeth; third joint of antennæ a little longer than the fourth; joints 1--5 of the flagellum strongly rounded out beneath, especially the three basal ones; space between the eyes at top about equal to the length of antennal joints 2 and 3; pubescence of the front and clypeus silvery; dorsulum and scutellum more distinctly punctured than in the female; impressed line on metanotum rather strong, the fovea at apex sometimes contiguous with the furrow on posterior face; tibiæ and tarsi spinose; longer spur of hind tibiæ a little longer than the first joint of hind tarsi; emargination of eighth ventral plate somewhat angular. Length 12--13 mm.

Florida (collection U. S. National Museum), New Jersey, August 24th, Montana (?). The Montana specimens may belong to a distinct species.

5. **Tachytes breviventris** Cress. Pl. XI, fig. 6.

♀.—Anterior margin of clypeus as in *validus*, except that it possesses but two distinct lateral teeth and medial production not impressed; space between the eyes at top slightly greater than the length of antennal joints 2 and 3 united; first joint of the flagellum scarcely one-quarter longer than the second; vertex as in *validus*; dorsulum with microscopic punctures; scutellum a little more

distinctly punctured than the dorsulum, with a distinct medial impression; metanotum with a narrow, but very distinct medial sulcus, the fovea at apex broad and shining; posterior face shining, the punctuation even finer than that on the dorsulum, deeply sulcate; spines on the tibiæ long and strong, as long or longer than those on the fore tarsi; ventral abdominal segments 1, 2 and the remainder laterally, finely and closely punctured, otherwise with strong, sparse punctures, black; basal half of mandibles, scape beneath, tegulæ, except base, apex of femora, tibiæ and tarsi, yellow-ferruginous; clypeus and front densely covered with silvery-gray pubescence and with longer pale hairs. Thorax, first segment of abdomen and femora, the latter sparsely clothed with grayish pubescence; apical margins of dorsal segments 1—4 and ventrals 2 and 3 silvery; pygidium with silvery pubescence. Wings subhyaline, with a slight yellow tinge, the nervures colored like the tegulæ, third submarginal cell extending beyond the apex of the marginal. Length 15 mm.

♂.—Anterior margin of clypeus produced into a quadrate lobe medially, armed with two extreme lateral teeth, the outer one of which is largest and most distinct; space between eyes at top about equal to length of second and third joints of the antennæ united; 1—4 of the flagellum distinctly rounded out beneath, but so strongly as in the allied species, the fifth and sixth joints are but slightly rounded out, first joint in length about equal to the second and is much narrowed basally; scutellum not strongly impressed medially; metanotum strongly furrowed, the furrow broadened apically, forming the large fovea; tibiæ and tarsi distinctly spinose; longer spur of hind tibiæ a little shorter than the first joint of hind tarsi; emargination of eighth ventral plate subangular. Legs, except coxæ, trochanters and basal portion of femora, yellow-ferruginous. Length 12—13 mm.

Texas; Springfield, Mass. This species is not a synonym of *validus*, as some authors have supposed.

6. **Tachytes prædator** n. sp. Pl. XI, fig. 4.

♀.—Median production of the clypeus divided into two distinct lobes, the extreme lateral teeth large and distinct; space between the eyes at top much narrower than in any of the allied species, if anything, a little less than the length of the second and third antennal joints united; joints 1—3 of the flagellum about equal, the third is possibly slightly shorter; dorsulum and scutellum with microscopic punctures, the latter strongly impressed medially; metanotum very finely granulated, with a faint impressed line, the fovea at apex deep and triangular; tibiæ and tarsi armed with strong spines. Abdomen beneath on segments 3—5, with fine sparse punctures, those on segment six coarse; pygidium bronzy, longer and the sides straighter than in the allied species, in shape similar to *T. abdominalis*; black; basal half of mandibles and the scape beneath ferruginous; greater part of anterior femora, apical portion of four hind femora, tibiæ, tarsi and tegulæ, yellow ferruginous; face, front, clypeus, cheeks and thorax rather densely clothed with golden pubescence, and in addition have longer, paler hairs; abdominal segments 1—4 above and 2—4 beneath on the sides, silvery. Wings flavo-hyaline, the third submarginal cell extending beyond the marginal. Length 17 mm.

♂.—Anterior margin of clypeus strongly rounded out in the middle, with one large, lateral tooth, situated in a broad emargination; furrow on the vertex long,

extending back on the occiput; space between the eyes at top about equal to the length of joints 2 and 3 of the antennæ; joints 1—5 of the flagellum strongly rounded out beneath, especially the third and fourth, the first joint shorter than the second; scutellum strongly impressed; furrow on metanotum as in the female; tibiæ and tarsi with tolerably strong spines; longer spur of hind tibiæ shorter than the first joint of the hind tarsi; emargination of eighth ventral plate somewhat angular, black; mandibles castaneous; legs, except coxæ, trochanters and base of femora, yellow-ferruginous; front, face, clypeus, cheeks and thorax, with dense golden pubescence. Length 12 mm.

Virginia, Texas.

7. **Tachytes columbiæ** n. sp. Pl. XI, figs. 8, 9, 10.

♀.—Anterior margin of clypeus scarcely produced medially, armed with two short teeth laterally; mandibles short, stout, obtuse at tip; joints 3 and 4 of the antennæ about equal in length; width of the clypeus in the middle (including the production) is but little greater than the distance between the eyes at the top; vertex with rather strong, sparse punctures, parted by a strongly impressed line; region within the ocelli finely punctured with an impressed line. Thorax finely and closely punctured; scutellum lightly impressed medially; metanotum slightly sulcate, more strongly so basally and apically, finely granulated; tibiæ and tarsi strongly spinose; ventral abdominal segments 3—6 sparsely punctured, black; mandibles and scape castaneous; apical portion of the femora, tibiæ, except a dark line within, tarsi, tegulæ and nervures, yellow-ferruginous; front, face, clypeus, cheeks, thorax and legs more or less, and the apical margins of segments 1—4 silvery; pygidium golden. Head, thorax, four anterior femora and first segment of abdomen are clothed with grayish pubescence. Length 13 mm.

♂.—Anterior margin of clypeus slightly emarginate medially, with two very obscure teeth laterally; third joint of antennæ distinctly shorter than the fourth, which is about equal to the fifth; joints of the flagellum 1—7 rounded out beneath, the sixth and seventh but slightly so; space between the eyes at top about equal to or possibly a little greater than the length of scape and following joint united; dorsulum and scutellum finely and closely, but distinctly punctured, the latter strongly impressed medially; metanotum with a strong furrow, which is broadest at apex; tibiæ and tarsi sparsely spinose, seventh dorsal segment tufted laterally with dark hair, eighth ventral with a deep, rounded emargination, four anterior femora in front, except base of medial pair, the apex and apical half of posterior pair, tibiæ and tarsi, yellow ferruginous. Length 10 mm.

District of Columbia and Virginia (Pergande).

8. **Tachytes crassus** Patt. Pl. XI, figs. 11—13.

♀.—Anterior margin of clypeus produced into a short, rounded lobe in the middle and with three rather indistinct teeth on each side; before the anterior margin there is a transverse depression or furrow; vertex parted by a distinct furrow, which begins behind the depression back of the ocelli; first joint of flagellum not one-quarter longer than the second, joints 3 and 4 about equal. Thorax finely and closely punctured, the punctures finer and closer beneath; dorsulum strongly depressed in the middle anteriorly; scutellum with a slight medial impression; metathorax above with a strong medial sulcus, which is

broadened into a somewhat pyriform fovea at apex of upper face, the posterior face more strongly sulcate; tibiæ and tarsi armed with stout thorns, those on the first joint of fore tarsi shorter than the third joint. Abdomen with exceedingly fine punctures, shining; basal portion of ventral segments 3—6 smooth, glabrous; apical portion of last ventral segment with large, separated punctures; pygidium with bronzy pubescence, black; front, clypeus, cheeks, scape beneath, thorax most densely beneath on the sides and in the sutures, femora and basal segment of abdomen clothed with bright (sometimes pale) golden pubescence; collar silvery, basal half of mandibles, palpi, scape beneath, tegulæ, apex of femora, tibiæ and tarsi ferruginous; dorsal segments 1—3 and ventrals 2 and 3, with their apical margins silvery; apical margins of ventral segments testaceous. Wings yellow hyaline, nervures ferruginous. Length 14—17 mm.

♂.—Antennæ longer and stouter than in the female; first joint of flagellum but little longer than the second, joint three a little longer than the fourth, joints 2—4 slightly rounded out beneath; anterior margin of clypeus strongly bowed in the middle, with three short, lateral teeth; space between the eyes at top much narrower than in the female, about equal to length of first joint of the flagellum; impressed line on vertex indistinct or absent; scutellum strongly impressed; sulcus on metathorax rather strong; dorsal segments of abdomen 1—4 margined with silvery (the fifth shows a slight trace also); sixth and seventh ventral segments with tufts of dark hair; eighth ventral segment with a broad, rounded emargination; hind tarsi, except apex of joints 1 and 2, not spinose. Length 13—14 mm.

Connecticut, New Jersey (August), Virginia, S. Dakota (Aldrich)

9. *Tachytes pepticus* Say.

♀.—Anterior margin of clypeus in middle bituberculate, or appearing slightly emarginate, with two large teeth at each extreme side; vertex finely and closely punctured, the impressed line distinct; space between eyes at top about equal to length of joints two and three of antennæ, third joint of antennæ about one-fourth longer than the following, which is distinctly longer than the fifth. Thorax more finely punctured than the vertex, depression in the middle of dorsulum, anteriorly, strong; scutellum slightly impressed medially; metanotum with a very faint furrow, the fovea at apex not so distinct as usual, posterior face of metathorax strongly sulcate, the sulcus short, broad at base, narrow and acute at apex; tibiæ and tarsi armed with strong spines, first joint of hind tarsi shorter than the two following united. Abdomen beneath on basal portion of segments 3—5 and on segment six sparsely punctured, segments 1, 2 and the apical portion of segments 3—5, finely and closely punctured, black; mandibles piceous; palpi, tegulæ and nervures, testaceous; last three joints of fore tarsi and the apical joint of the four posterior ferruginous; front, face, clypeus and sides of thorax clothed with silvery pubescence, brightest on face and clypeus; base of mandibles, collar, suture of thorax, legs and apical margins of segments 1—4, dorsally, with silvery pile; in certain lights the first three dorsal segments appear entirely silvery; pygidium bronzy, median and hind tibiæ more or less with brown pubescence. Length 13—15 mm.

♂.—Anterior margin of clypeus broadly produced; third joint of antennæ but little longer than the fourth, both these joints narrowed basally, the eleventh joint normal and about equal to the twelfth; scutellum distinctly impressed;

metanotum with a polished fovea at base and apex, which are connected by a very faint furrow; first joint of hind tarsi slightly longer than the two following joints united; first joint of the medial tarsi almost as long as the three following. Abdomen beneath finely and evenly punctured; emargination of the last ventral plate broad and round. Length 9—13 mm.

Texas, Illinois, Nebraska, Colorado, California, Washington.

10. **Tachytes fulviventris** Cress. Pl. XI, fig. 16.

♀.—Clypeus broadly produced anteriorly, with two large teeth at the extreme side; space between eyes at top greater than the length of antennal joints 2 and 3; vertex with exceedingly fine and close punctures, the medial impressed line distinct, but not strong; first joint of flagellum decidedly longer than the second, which is about equal to the following joint, joints 7—9 not more than twice longer than broad. Thorax punctured like the vertex; scutellum not impressed medially; metanotum finely granulated, not sulcate, the fovea at apex distinct and with fine transverse striations, posterior face strongly furrowed; tibiæ with strong thorns; ventral abdominal segments 3—6 sparsely punctured; pygidium bronzy, in certain lights silvery-black; mandibles rufo-piceous, tibial spurs, tarsi more or less, and abdominal segments 1—3 ferruginous; front, clypeus, scape, thorax, legs, except posterior femora, apical portion of segments 1—4 above and on segments 2 and 3 beneath silvery; dorsulum, occiput, metathorax and first dorsal segment above with grayish hair. Wings hyaline, nervures ferruginous. Length 12—17 mm.

♂.—Clypeus produced anteriorly as in the male of *pepticus*; space between eyes at top a little greater than the length of joints 2 and 3 of the antennæ; first joint of flagellum narrowed about one-third towards the base, distinctly longer than the second joint, which is about equal to the third; joints 9—11 of antennæ broadened, the twelfth joint much narrower than the preceding one, the last joint elongate, dorsulum more strongly depressed anteriorly than in the female; scutellum very slightly impressed medially, sulcus on posterior face of metathorax longer than the female, extending nearly to the apex; first two segments, sometimes first three, reddish; emargination of eighth ventral plate broad, rounded. Length 11—14 mm.

Var. Abdomen entirely black.

Texas, Nebraska, Colorado, N. Mexico, Montana, Washington.

11. **Tachytes spatulatus** n. sp. Pl. XI, fig. 17.

♂.—Clypeus similar to *fulviventris*; space between the eyes at top about equal to the length of antennal joints 2 and 3, at any rate not greater; first joint of flagellum not narrowed so much as in *fulviventris*, distinctly longer than the second, which is also narrowed basally, the tenth and eleventh joints somewhat spatulate, joints 7—9 narrowest; scutellum not impressed; metanotum not at all sulcate, the fovea at apex distinct and with fine, indistinct, transverse striations, emargination of last ventral segment much narrower than in *fulviventris*, black; mandibles rufo-piceous, apical joints of the tarsi and abdominal segments 1, 2 and base of the third, ferruginous; front, clypeus, sides of thorax, four anterior femora with silvery-gray pubescence. Head and thorax above and first segment of abdomen with long, pale pubescence; apical margins of segments 1—4, the seventh entirely, the tibiæ and tarsi with silvery pile. Wings subhyaline, nervures dark. Length 12 mm.

Nevada.

SECTION II.

FEMALES.

- 1.—Greater part of femora reddish.....**distinctus.**
Greater part of femora or the legs entirely black2.
- 2.—First joint of fore tarsi much contracted basally, apical portion of first three abdominal segments silvery.....**contractus.**
First joint of fore tarsi not contracted.....3.
- 3.—First two dorsal segments of abdomen, apically, silvery; legs, except tarsi, black, the tibiæ with dense silvery pubescence; metanotum distinctly punctured**aurulentus.**
First four or five segments silvery.....4.
- 4.—Space between eyes at top about equal to length of joints 2 and 3 of antennæ united.....5.
Space between eyes at top greater than length of joints of the antennæ 2 and 3 united.....6.
- 5.—Abdomen reddish, or red and black; hind tibiæ armed outwardly with a series of short, black, stout and blunt thorns.....**abdominalis.**
Abdomen black; posterior tibiæ armed outwardly with a series of whitish, long and rather acute thorns.....**sericatus.**
- 6.—Mandibles very broad and flat, with an exceedingly narrow notch; abdomen black.....**obscurus.**
Mandibles of the normal form, with a broad notch.....7.
- 7.—Metanotum not at all furrowed; abdomen varying from red and black to entirely ferruginous; size also variable.....**rufofasciatus.**
Metanotum more or less furrowed.....8.
- 8.—Space between eyes at top greater than the length of antennal joints 2 and 3 united; clypeus not dentate.....**obductus.**
Space between eyes at top a little less than the length of second and third antennal joints united; clypeus armed with a large prong on each side.

mergus.*MALES.*

- 1.—Wings yellow, with the apical portion dark.....2.
Wings not yellow, hyaline or subhyaline.....3.
- 2.—Third joint of antennæ nearly one-third longer than the fourth; metanotum distinctly punctured; tibiæ and tarsi black.....**aurulentus.**
Third joint of antennæ but little longer than the fourth; metanotum not punctured; apex of femora, tibiæ and tarsi yellow ferruginous.
elongatus.
- 3.—Abdomen and legs more or less red.....4.
Abdomen and legs black.....5.
- 4.—Third joint of antennæ in length about equal to the fourth; metanotum slightly furrowed; femora, except base, reddish.....**rufofasciatus.**
Third antennal joint shorter than the fourth; metanotum not furrowed; femora, except apex, black.....**minimus.**
- 5.—Space between eyes at top much less than the length of antennal joints 2—4 united.....6.
Space between eyes at top about equal to the length of antennal joints 2—4 united; apical margins of the wings fuscous.....**parvus.**
- 6.—Notch on outer edge of mandibles very narrow; body not densely silvery sericeous.....**obscurus.**
Notch on outer edge of mandibles as usual; body rather densely clothed with silvery sericeous pile.....**sericatus.**

12. *Tachytes aurulentus* Fab. Pl. XI, fig. 18.

♀.—Anterior margin of clypeus in the middle forming an obtuse angle, the extreme sides armed with two large teeth, in some specimens not distinctly separated; front with a strong impressed line, which extends from front ocellus to base of antennæ; vertex opaque, appearing impunctate; region enclosed by the ocelli parted by an impressed line; mandibles longer, more strongly curved, and not so broad as any of the preceding species; first joint of flagellum fully one-third longer than the second; the scape is longer than usual; dorsulum having the appearance of being microscopically granulose, scarcely depressed anteriorly; scutellum not impressed; metanotum with distinct, though fine, separated punctures, with a distinct sulcus, which is broadened into a deep, dimple-like fovea at apex, posterior face of metathorax finely granulated, with a very deep medial sulcus; tibiæ and tarsi armed with stout thorns; outer edge of fore tarsi, when viewed from within, not contracted near the base. Abdomen above and ventral segments 1—3 with exceedingly fine and close punctures; ventral segments 4—6 with large, sparse punctures; pygidium bronzy, more acute at apex than is usual, black; basal half of mandibles, tegulæ, anterior tarsi, except claws, and the four hind tarsi, except base and apex, ferruginous; front, clypeus, cheeks, thorax on sides and beneath, and first dorsal segment of abdomen with long grayish golden pubescence; collar, metapleuræ at apex and most of the legs with a silvery pile; posterior tarsi clothed with brown pile on outer side; basal two-thirds of wings flavo-hyaline, the apical portion darkened, especially along the costa; apical margins of dorsal segments 1 and 2 silvery, in certain lights these segments appear entirely griseous. Length 18—22 mm.

♂.—Clypeus more broadly produced than in *elongatus*, rounded anteriorly and with an exceedingly slight emargination in the middle; space between the eyes at top about equal to length of second and third joints of antennæ united, none of the flagellum joints rounded out beneath; vertex finely and closely punctured, the impressed line distinct; metanotum marked by the fovea at apex only; tibiæ armed with strong thorns. Legs, with exception of tibial spurs and tarsi medially, black; eighth ventral segment with a deep, rounded emargination at apex. Length 12—16 mm.

New Jersey (July and August; common), Florida, Georgia, Louisiana, Tennessee, Texas, Missouri.

13. *Tachytes contractus* n. sp. Pl. XI, fig. 21.

♀.—Anterior margin of clypeus rounded, armed with an indistinct tooth at each extreme side; second and third joints of flagellum about equal in length; vertex with exceedingly fine and close punctures, with a strong medial impressed line. Thorax punctured like the vertex, a little more distinctly so on the dorsulum, the latter in the middle, anteriorly, slightly depressed; scutellum not at all impressed; metanotum not furrowed, but with a strong, pyriform fovea at apex; the posterior face deeply sulcate; tibiæ and tarsi armed with stout thorns; when viewed from within, the outer edge of the first joint of the fore tarsi is seen to be strongly contracted near the base; ventral abdominal segments 3—6 with large, sparse punctures, the apical margins testaceous, black; basal half of mandibles, tegulæ, apex of femora, tibiæ and tarsi, ferruginous; front, clypeus, scape, cheeks, collar, four anterior femora, sides of thorax, metapleuræ at apex with long, silvery pubescence; dorsal abdominal segments 1—3 and ventrals

3 and 4, on apical portion, with silvery pile, which, when the insect is held in certain lights, appears to cover these segments entirely. Wings flavo-hyaline, nervures ferruginous, the apical third a little darker; dorsulum clothed with golden pubescence, which is most dense on the sides and posteriorly. Length 18 mm.

Georgia.

14. **Tachytes distinctus** Sm. Pl. XI, fig. 20.

♀.—Anterior margin of clypeus in the middle with a very slight incurvation, which is more distinct when viewed from behind, or entire, the large extreme lateral tooth is situated in an emargination; third joint of antennæ distinctly longer than the fourth, the fourth and fifth about equal; vertex with exceedingly fine and close punctures, the median impressed line distinct. Thorax punctured like the vertex, the metanotum even more closely so; dorsulum but little depressed in the middle, anteriorly; scutellum without medial impression; metanotum with an exceedingly slight, impressed line, in most specimens without any trace of a line, at the apex with a strong, pyriform fovea; posterior face with a very strong medial sulcus, which does not extend to the apex; tibiæ and tarsi armed with a stout thorn; ventral abdominal segments 3–5 with large, sparse punctures, black; basal half of mandibles, palpi, scape beneath in part, tegulæ and legs, except coxæ and trochanters, ferruginous; front, clypeus, cheeks, collar and mesopleuræ with long, silvery pubescence; dorsulum, especially on the sides, postscutellum and apex of metapleuræ with golden pubescence; femora, with exception of a silvery pile, nude; dorsal abdominal segments 1–3 with their apical margins silvery; apical margins of ventral segments in some specimens are reddish. Wings flavo-hyaline, apical margins darker, nervures ferruginous. Length 15–21 mm.

Philadelphia (Smith), District of Columbia, Georgia, Florida, Texas, Missouri, Nebraska, California.

I have been unable to identify the typical form of this species, which is said to have the femora black; all my specimens belong to the var. B of Smith, having the femora reddish. It is probable Smith has confused two species here.

15. **Tachytes elongatus** Cress. Pl. XI, fig. 19.

♂.—Clypeus broadly produced, the production rounded at apex or subtruncate; vertex finely punctured, the medial impression very strong; none of the joints of flagellum rounded out beneath; space between eyes at top not equaling the length of the second and third joints of antennæ. Thorax punctured like the vertex; dorsulum anteriorly, in the middle not strongly depressed; scutellum without impression; metanotum with an exceedingly slight, impressed line, the fovea at apex strong and variable in form; four posterior tibiæ armed with tolerably stout thorns. Abdomen above and beneath with exceedingly fine and close punctures, those beneath a trifle more distinct; eighth ventral segment with a broad, round emargination, black; mandibles, except apical portion, palpi, knees, tibiæ, tarsi and the tegulæ ferruginous; front, clypeus, scape and dorsulum on sides with long, pale pubescence; cheeks, collar, pleuræ, metathorax and first segment of abdomen with griseous pubescence; dorsal segments 1–4

ventrals 2 and 3 on apical margins, and the seventh dorsal segment, silvery. Wings flavo-hyaline, apical margins fuscous, nervures ferruginous. Length 11–17 mm.

Texas, Missouri, California, Washington, Mexico.

16.—**Tachytes sericatus** Cress.

♀.—Anterior margin of clypeus slightly emarginate medially, its extreme side armed with two rather indistinct teeth; vertex more finely and closely punctured than in *pepticus*, and lacks the larger scattered punctures which that species possesses, the medial impressed line faint; third antennal joint but little longer than the fourth, which is about equal to the fifth, tenth and eleventh joints not more than twice longer than they are wide; space between eyes at top is less than in *pepticus*; region enclosed by the ocelli impressed. Thorax punctured like the vertex depression on anterior part of dorsulum not strong; scutellum not at all impressed; the base of metanotum is marked by a faint fovea, the apex with a strong one;* tibiae and tarsi armed with strong, whitish spines. Abdomen beneath, on segments 1 and 2, punctured as above; basal portion of segments 3–6 smooth, shining, apical portion with large, sparse punctures, black; mandibles piceous; palpi, tegulae, nervures, apex of tarsi testaceous; front, face, clypeus, clothed with silvery pubescence; cheeks, thorax, almost entirely, and legs with silvery pile; metathorax with long, pale pubescence; abdomen above silvery sericeous when viewed from behind brightest on apical portion of the segments; pygidium bronzy. Length 12–14 mm.

♂.—Form more slender than the female; antennae long, fourth joint about one-third longer than the preceding one, joints 4–7 about equal in length; region enclosed by the ocelli more strongly impressed than in the female; vertex and thorax distinctly punctured; furrow on posterior face of metathorax not so strong as in the female, and reaches to the apex; tibiae and tarsi rather strongly spinose. Abdomen finely and closely punctured above and beneath, less silvery than the female; last dorsal segment silvery; eighth ventral roundly emarginate. Length 10–11 mm.

Texas, Georgia.

17. **Tachytes rufofasciatus** Cress.

♀.—Anterior margin of clypeus rounded, not emarginate, not dentate laterally; vertex very finely and closely punctured and with a few large, scattered punctures; depression behind ocelli deep, parted by an impressed line; region enclosed by the ocelli more distinctly punctured, divided by a very strong sulcus; third antennal joint distinctly longer than the fourth, which is, if anything, a little longer than the fifth; space between eyes at top greater than in *sericatus*, a little wider than the length of joints 2 and 3 of antennae united. Thorax punctured like the vertex; scutellum impressed medially; metanotum with shallow, indistinct punctures, not furrowed, tibiae and tarsi armed with strong, whitish spines, black; mandibles, except tips, four anterior tibiae, tarsi and abdomen, more or less reddish; the abdomen varies from almost black to entirely ferruginous. Wings subhyaline, with or without a yellowish tinge, nervures

* A specimen from Florida (coll. U. S. National Museum), which I have doubtfully referred to this species, has the metanotum strongly furrowed.

testaceous; face, clypeus, thorax more densely in the sutures and the legs sparsely clothed with pale pubescence; pygidium with a bright golden pubescence. Length 11--15 mm.

♂.—Fourth joint of antennæ but little longer than the preceding one, joints 4--7 not equal, each shorter than the preceding one; front divided by a very deep sulcus; vertex punctured as in the female, but lacks the large scattered punctures, the impressed line tolerably distinct; scutellum not impressed; metanotum with a faint impressed line. Legs, except coxæ, trochanters and basal half of femora, ferruginous; tibiæ and tarsi distinctly spinose. Abdomen not, or indistinctly punctured above, ventrally with rather coarse, close punctures; apical half of first and the second segments entirely ferruginous, the apical margins of the other segments more or less testaceous; eighth ventral segment with a round, broad emargination. Length 9--11 mm.

Georgia, Florida, Mississippi, Texas, Nebraska, California. A variable species, both in size and coloring.

18. **Tachytes minimus** n. sp.

♂.—Resembles *rufofasciatus*, but is much smaller; joints 5--7 of antennæ about equal in length, the fourth slightly shorter than the fifth and about one-quarter longer than the third; front strongly and evenly convex, finely and closely punctured, with a faint impressed line; impression behind ocelli strong, out of which a distinct and rather long impressed line originates; anterior margin of clypeus subtruncate; dorsulum more finely punctured than the front; scutellum not impressed; metanotum not at all furrowed, finely, but distinctly granulated, the fovea at apex indistinct; tibiæ and tarsi feebly spinose; notch on fore femora more distinct than in *rufofasciatus*; abdomen above and beneath indistinctly punctured; eighth ventral segment not near so deeply notched as in *rufofasciatus*, black; front, face and thorax sparsely clothed with silvery pubescence; mandibles medially, scape at apex, tips of femora, tibiæ and tarsi, reddish yellow; tegulæ and apical margins of dorsal segments pale testaceous, the latter have in addition silvery pile. Wings subhyaline, iridescent, nervures dark. Length 5.5--7 mm.

Texas, Georgia, Illinois.

19. **Tachytes abdominalis** Say.

♀.—Anterior margin of clypeus rounded, a little thickened and slightly emarginate in the middle, the emargination not always distinct, the two lateral teeth short and obtuse; space between eyes at top but little, if anything, greater than the length of joints 2 and 3 of the antennæ united; median impression of vertex rather strong; first joint of flagellum about equal to the second, which is slightly longer than the third, the apical joints more than two times longer than broad. Thorax punctured like the vertex; depression on dorsulum anteriorly in the middle faint; scutellum not impressed; metanotum finely granulated, with a slight, but not always distinct impressed line down the middle, the fovea at apex not striated; sulcus on posterior face not much broader at base than at apex; ventral abdominal segments 3--6 with large, sparse punctures; pygidium rather strongly depressed along its margin, black; mandibles more or less rufous; tarsi and segments 1 and 2, sometimes the third also ferruginous; front, clypeus, thorax, legs and abdomen more or less silvery; occiput, metathorax and first

dorsal segment with pale sparse pubescence. Wings subhyaline, nervures and tegulæ testaceous, the recurrent nervures very near each other on the cubital nervure. Length 9—13 mm.

Texas, Arkansas (Say), Mexico.

20. **Tachytes obscurus** Cress.

♀.—Anterior margin of clypeus rounded, not emarginate, with two obtuse, extreme lateral teeth; mandibles large, broad and with the notch on outer margin narrow; vertex with fine, distinct punctures; medial impressed line distinct, depression behind ocelli strong and contains an arch-like impressed line; antennæ much longer than in *sericatus*, third joint shorter than the fourth, but when seen in certain position appears to be about equal, joints 10 and 11 over three times longer than their width; space between eyes at top greater than the length of the second and third antennal joints; region enclosed by the ocelli strongly impressed medially. Thorax, with exception of metathorax, punctured like the vertex; metathorax, except sides, subopaque, almost smooth, above with a distinct fovea at apex, the posterior face with a medial furrow similar to that of the male of *sericatus*; tibiæ armed with short, stout, black thorns, those on the tarsi longest; first joint of hind tarsi about as long as the two following united, possibly a little shorter. Abdomen above and segments 1 and 2 beneath, finely and closely punctured; basal portion of ventral segments 3—6 smooth and shining, the apical portion with large, sparse punctures, black; mandibles rufopiceous; face and clypeus clothed with dense silvery pubescence; cheeks, collar above, apical margins of segments 1—3 laterally and the legs with silvery pile. Head and thorax clothed with long, pale pubescence. Wings subhyaline; tegulæ and nervures dull testaceous; pygidium silvery at base, the remainder bronzy. Length 13—14 mm.

♂.—Of the same form as *sericatus*, but smaller and scarcely silvery; antennæ rather long, stouter than in *sericatus*, fourth joint one-third longer than the preceding one and slightly longer than the fifth joint, joints 5—7 about equal in length; region enclosed by the ocelli distinctly impressed medially, but not so strongly as in *sericatus*; vertex and thorax finely and distinctly punctured; metathorax above appearing impunctate, the fovea at apex elongate and shallow, posterior face granulated, the medial sulcus strongest basally. Abdomen finely and closely punctured. Wings hyaline, nervures testaceous; tibiæ and tarsi densely clothed with silvery sericeous pile. Length 7—9 mm.

District of Columbia, Georgia, Texas, Mexico.

21. **Tachytes parvus** n. sp.

♂.—Resembles *obscurus*; front strongly depressed before the anterior ocellus so that it presents two rather strong protuberances; region enclosed by the ocelli also very strongly furrowed; space between eyes at top about equal to the length of joints 2—4 of antennæ united; fourth joint of antennæ longer than third, the fourth is shorter than the fifth, joints 5 and 6 equal; dorsulum with scarcely a depression anteriorly; metanotum appearing smooth, not furrowed, the fovea at apex tolerably distinct; tibiæ and tarsi distinctly spinose, the spines and the tibial spurs whitish. Abdomen above and beneath finely and closely punctured; emargination of eighth ventral segment deep, wider than in *obscurus*, black; front, clypeus and sides of thorax with silvery pile, the legs and

abdomen sparsely so. Head and thorax sparsely clothed with long, pale pubescence. Wings subhyaline, iridescent, apical margins darker, nervures testaceous. Length 6.5–7 mm.

Two specimens; Camden County, N. J., Aug. 31, 1890. May be the male of either of the two following species.

22. **Tachytes obductus** n. sp.

♀.—Anterior margin of clypeus subtruncate; front and ocellar region strongly impressed, especially the latter; third antennal joint in length about equal to the fourth, if anything a little longer, joints 4 and 5 about equal; space between eyes at top a little greater than the length of antennal joints three and four united; vertex and dorsulum finely and closely punctured, the latter more distinctly so; depression on the dorsulum anteriorly, in the middle, not strong; scutellum not impressed, metanotum very finely and closely punctured, finely granulated laterally, depressed on each side and with a faint, though distinct, medial impressed line; tibiæ and tarsi rather strongly spinose. Abdomen very finely and closely punctured above, beneath on segments 3–6 with large, scattered punctures, black; mandibles in the middle ferruginous; tegulæ, nervures and spines on the legs testaceous; face, clypeus, cheeks, thorax and legs more or less, the abdomen above, especially on apical margins of the segments with bright silvery pile. Head, thorax and first abdominal segment clothed with sparse, pale pubescence. Wings subhyaline, a darker cloud in the marginal cell. Length 11 mm.

Tennessee.

23. **Tachytes mergus** n. sp.

♀.—Anterior margin of clypeus armed laterally with a large prong; space between eyes at the top less than the length of joints 2 and 3 of antennæ; antennæ long, slender; scape unusually long; third antennal joint distinctly longer than the fourth, which is a little longer than the fifth; mandibles long and slender; dorsulum finely and closely punctured; metanotum also finely punctured, with a very strong medial sulcus, which is much widened on apical portion. Legs rather strongly spinose; pygidium triangular, the apex rather acute, black; base of mandibles yellowish, the remainder rufous; tegulæ and nervures testaceous; front, clypeus, cheeks, thorax rather densely, and abdomen more or less, more obvious in certain lights, and the legs with silvery pile. Wings subhyaline, the apical margins paler; pygidial area silvery. Length 9 mm.

Camden County, N. J., July 6, 1890.

UNIDENTIFIED.

Tachytes dives Lep.

♀.—Head black, its anterior part furnished with golden hair. Antennæ black; prothorax and mesothorax black, furnished with golden pile; metathorax black, shining, its hair gray. Abdomen black, before the posterior border of the segments having a band of glaucous; anus black. Legs ferruginous, the four posterior having the coxæ, trochanters and base of femora of a black color. Wings black; nervures, stigma, costa and tegulæ of the same color. Length 7 lines (14 mm.).

Carolina. Museum of M. Serville.

Bibliography and Synonymy.

- T. validus** Cress.
T. validus Cr., Trans. Am. Ent. Soc. iv, p. 216, ♀ ♂.
T. breviventris Patton, Proc. Bost. Soc. Nat. Hist. xx, p. 392.
- T. mandibularis** Patt.
T. mandibularis Patt., ibid. p. 394, ♀ ♂.
- T. harpax** Patt.
T. harpax Patt., ibid. p. 395, ♀ ♂.
- T. calcaratus** n. sp.
- T. breviventris** Cress.
T. breviventris Cress., loc. cit. p. 216, ♂.
- T. prædator** n. sp.
- T. columbiæ** n. sp.
- T. crassus** Patt.
T. crassus Patt., loc. cit. p. 393, ♀.
- T. pepticus** Say.
Lyrops pepticus Say, Bost. Journ. i, p. 371, ♀ ♂.
Tachytes pepticus Sm., Cat. Brit. Mus. Hym. iv, p. 308.
- T. fulviventris** Cress.
T. fulviventris Cr., Proc. Ent. Soc. Phil. iv, p. 466, ♀.
T. cælebs Patt., Bull. U. S. Geol. Survey, v, p. 355, ♂.
- T. spatulatus** n. sp.
- T. aurulentus** Fab.
Larra aurulenta Fab., Syst. Piez. p. 220.
Lyrops aurulenta Say, Bost. Journ. i, p. 371.
? *Tachytes aurulentus* Lep., Hym. iii, p. 247.
Tachytes aurulentus Sm., Catal. Brit. Mus. iv, p. 306.
Liris coxalis Patton, Ent. News, iii, p. ♀ ♂.
- T. contractus** n. sp.
- T. distinctus** Sm.
T. distinctus Sm., Catal. Brit. Mus. iv, p. 307, ♀.
- T. elongatus** Cress.
T. elongatus Cr., Trans. Am. Ent. Soc. iv, p. 215, ♂.
- T. sericatus** Cress.
T. sericatus Cress., ibid., p. 216, ♀ ♂.
- T. rufofasciatus** Cress.
T. rufofasciatus Cress., ibid. p. 217, ♂.
- T. minimus** n. sp.
- T. abdominalis** Say.
Larra abdominalis Say, West. Quart. Rep. ii, p. 77, ♀.
Larrada abdominalis Cr., loc. cit. i, p. 379.
Tachytes abdominalis Cress., loc. cit. iv, p. 217.
- T. obscurus** Cress.
T. obscurus Cress., loc. cit. p. 217, ♀.
T. texanus Cress., ibid. p. 217, ♂.
- T. parvus** n. sp.
- T. obductus** n. sp.
- T. mergus** n. sp.

UNIDENTIFIED.

- T. dives** Lep.
T. dives Lep., Hym. iii, p. 247, ♀.

EXPLANATION OF PLATE XI.

- Fig. 1.—Anterior margin of clypeus, *T. validus* ♀.
“ 2.—Eighth ventral plate, *T. validus* ♂.
“ 3.—Anterior margin of clypeus, *T. calcaratus* ♂.
“ 4.—Anterior margin of clypeus, *T. prædator* ♀.
“ 5.—Eighth ventral plate, *T. harpax* ♂.
“ 6.—Eighth ventral plate, *T. breviventris* ♂.
“ 7.—Eighth ventral plate, *T. calcaratus* ♂.
“ 8.—Anterior margin of clypeus, *T. columbiæ* ♀.
“ 9.—Eighth ventral plate, *T. columbiæ* ♂.
“ 10.—Anterior margin of clypeus, *T. columbiæ* ♂.
“ 11.—Anterior margin of clypeus, *T. crassus* ♀.
“ 12.—Eighth ventral plate, *T. crassus* ♂.
“ 13.—Anterior margin of clypeus, *T. crassus* ♂.
“ 14.—Anterior margin of clypeus, *T. elongatus* Cr.
“ 15.—Eighth ventral plate, *T. elongatus*.
“ 16.—Apical portion of antennæ, *T. fulviventris* ♂.
“ 17.—Apical portion of antennæ, *T. spatulatus*.
“ 18.—Anterior margin of clypeus, *T. aurulentus* ♀.
“ 19.—Fore coxæ, showing appendages, *T. elongatus*, etc.
“ 20.—Anterior margin of clypeus, *T. distinctus*.
“ 21.—First joint of fore tarsi, *T. contractus*.
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